

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (previously presented): A method of automatically registering a domain name in a network to which a host belongs, the method comprising:
  - (a) creating a link local address of the host and extracting from the link local address an interface ID that is used to identify the host from other hosts if the created link local address is not in use; and
  - (b) creating a domain name using the interface ID and name information of the network to which the host belongs and registering the domain name in a domain name server.
2. (previously presented): The method of claim 1, :  
wherein the creating the domain name comprises; transmitting to the domain name server the created domain name with a predetermined first message; and  
generating a new domain name if the domain name has already been in the domain name server and a predetermined second message indicating the presence of the domain name in the domain name server is received.
3. (previously presented): The method of claim 2, wherein the created domain name is transmitted to the domain name server with a neighbor solicitation (NS) message.
4. (previously presented): The method of claim 2, wherein the predetermined second message indicating the presence of the domain name is received from the domain name server with a neighbor advertisement (NA) message.

5. (previously presented): The method of claim 1, wherein the name information of the network corresponds to a suffix of the domain name of the network to which the host belongs.

6. (previously presented): The method of claim 5, wherein in , “interface ID.suffix” is created as the domain name, wherein “interface ID” corresponds to the extracted interface ID.

7. (previously presented): The method of claim 1, wherein in , the name information of the network to which the host belongs is received with a router advertisement (RA) message.

8. (previously presented): The method of claim 1, wherein in the creating of the link local address of the host and extracting the interface ID, it is determined whether the created link local address has already been used using duplicate address detection (DAD).

9. (previously presented): The method of claim 1, wherein in the creating of the link local address of the host and extracting the interface ID, a lower 64 bits of the created link local address, except for its prefix, is extracted as the interface ID.

10. (original): The method of claim 1, wherein the host is an IPv6 host.

11. (previously presented): A system of automatically registering a domain name, the system comprising:

a host, which receives name information of a network to which the host belongs, creates a domain name using an interface ID that is used to identify the host from other hosts and the name information of the network, and outputs the created domain name; and

an auto-registration server, which transmits the name information of the network to the host, receives the created domain name, and registers the created domain name in a domain name server.

12. (previously presented): The system of claim 11, wherein the host comprises:

a link local address creating unit, which creates a link local address of the host;  
an interface ID extracting unit, which receives the created link local address and extracts an interface ID from the received link local address; and  
a domain name creating unit, which creates a domain name using the extracted interface ID.

13. (previously presented): The system of claim 12, wherein the link local address creating unit creates the link local address of the host, determines whether the created link local address is in use using duplicate address detection (DAD), and creates a new link local address if the created link local address is in use.

14. (original): The system of claim 12, wherein the interface ID extracting unit extracts the lower 64 bits of the created link local address, except for a prefix, as the interface ID.

15. (previously presented): The system of claim 11, wherein the auto-registration server comprises:

a network name information transmitting unit, which transmits the name information of the network to the host;

a domain name managing unit, which receives the domain name, registers the received domain name in a domain name server, and if the received domain name is already present in the domain name server, notifies the host that the received domain name is already present in the domain name server; and

a domain name information storing unit, which stores the registered domain name information for a predetermined amount of time.

16. (previously presented): The system of claim 15, wherein the network name information transmitting unit transmits the name information related to the network with a router advertisement (RA) message.

17. (previously presented): The system of claim 15, wherein the domain name managing unit receives the created domain name with a neighbor solicitation (NS) message and transmits information on the presence of the received domain name with a neighbor advertisement (NA) message to allow the host to create a new domain name.

18. (original): The system of claim 11, wherein the host is an IPv6 host.

19. (currently amended): A computer readable ~~recording~~ physical storage medium having embodied thereon a method of automatically registering a domain name of a network to which a host belongs, wherein the method comprises:

(a) creating a link local address of the host and extracting from the link local address an interface ID that is used to identify the host from other hosts if the created link local address is not in use; and

(b) creating a domain name using the interface ID and name information of the network to which the host belongs and registering the domain name in a domain name server.